MISSION SERVICES MILESTONE CHART
CODE 450

NASA

GSFC

2003　　　**2004**　　　**2005**　　　**2006**

All future Shuttle launch dates currently UNDER REVIEW

Customer Commitment

107
Jan / Feb

GN

Jan-CESat
Jan-PF
Mar-PF
Mar-WPS
May-WPS
June-WPS
July-WPS
Sep-WPS
Feb-ProSEDS
Apr-DART
July-Helios-2A
Sep-GLAST
Oct-NPP
Dec-OSTM

SN

Jan-SORCE
Apr-GALEX
Nov-GPB
Dec-SWIFT
Jan-CNOFS
Jan-Aura
Apr-ATV
Feb-HTV

MISSION SERVICES CUSTOMER FORUM

Mar　July　Nov　Mar　July　Nov　Mar　July　Nov　Mar

Code 450 Activities

CODE 450 ACTIVITIES

Technology

Feasibility Study Phase I
Mar

Feasibility Study Phase II
May

Concept Review
Oct

MARS LASER COMMUNICATIONS (LaserComm)

Planning

GPS/Galileo TWG
TBD

World Radio Conference
June/July

Space Frequency Coordinating Group Meetings
Sep

SPECTRUM MANAGEMENT

Acquisition Strategy Approved
Feb

Site Visits
Mar 12-14

Final Acquisition Strategy
Jan

Issue Draft RFP
Mar

Contract Awards
Fall 2003

Task Begins
Jan

NEAR EARTH NETWORK SERVICES (NENS) PROCUREMENT

Standards

Documentation Releases Year-round
See CCSDS Documentation Notes

Tech Standards Working Group
Mar

Spring CCSDS Meeting - ESA/ESRIN (Italy)
Apr

CCSDS Recommendations to ESTO
June

Spring CCSDS Meeting - ESA/ESTEC (The Netherlands)
Mar / Apr

CCSDS Fall Meeting (Annapolis)
Nov / Dec

CONSULTATIVE COMMITTEE FOR SPACE DATA SYSTEMS (CCSDS)

Space Network

SPACE NETWORK

Technology

Testing
Summer 2003
(Date TBD)

Ka-BAND PHASED ARRAY ANTENNA

KaTP ORR/TRR
Feb

Documentation Releases
See KaDS Doc Notes
Sep

Ka-BAND DATA SERVICES (KaDS)

Upgrades

DAS Qualification Test
Feb / Mar

Release 1.1 Regression Test
June

Server Training at WSC
June

Release 1.1 ORR/TRR
Aug

Release 1 ORR & Trans. to OPS
Feb

System Design Spec
May

Support DAS ORR
June

Release 03.1 ORR
July

SN WEB SERVICES INTERFACE (SWSI)

Factory AT
Jan

MSR
Jan

TRR
Apr

General Sys Stability Test
Apr

Installation
May

End-to-End Testing
June

Initial Operations Capability
July

Final Operations Capability
Sep

Final Dry Run Qual Tests
Apr

Formal DAS/SWSI Testing
Apr

Pack & Ship
May

Site Acceptance
June

DEMAND ACCESS SYSTEM (DAS)

Ground Network

GROUND NETWORK

Technology

TDRSS RF End-to-End Testing at DFRC
Mar

Test Flights
June/July

Flight Demo #2
Fall 2003

SPACE-BASED TELEMETRY AND RANGE SAFETY (STARS)

KaTP ORR/TRR
Feb

Autotrack Demo
Feb

Autotrack Demo
May

600 Mbps Demo
Aug

Ka-BAND TRANSITION PROJECT (KaTP)

TDRS

TRACKING AND DATA RELAY SATELLITE

TDRS-I On Orbit Test Review
Jan

TDRS-J On Orbit Test Review
Feb

TDRS-J On Orbit Test Review
May

TDRS-I On Orbit Test Review
June

TDRS-I Acceptance
July

TDRS-J On Orbit Testing
Jan / Feb

TDRS-I Momentum Unload Tests
Mar

TDRS-J Acceptance
May

Sr. Mgmt Meeting
June

TDRS-I and -J ORR
July

TRACKING AND DATA RELAY SATELLITE SYSTEM (TDRSS)

Architecture Downselect
Apr

Phase I Review
July

Final Architecture Review
Sep

Phase II Review
Dec

TDRSS FOLLOW-ON

LEGEND

PROJECT ACTIVITIES

- Shipping
- S Systems Testing
- A Acceptance Testing
- C Customer Integration Testing
- Segment Completion
- Review
- Ready for Operational Support
- D Document Release
- R Software Release
- Miscellaneous

[# of Sounding Rocket Launches]
[Enterprise Code]

Launch vehicle extends over required services
GN [Launch Site]
SN [Launch Date]
[Mission Name]
[Launch Date]

Shuttle Launch
[STS #]
[Date]

This chart has been prepared under the direction of GSFC/N&MS/Code 450. Requests for distribution and questions about the content of this chart should be addressed to Alvin Robles at robles_alvin@bah.com; (301) 805-5436 or Philip Liebrecht/Code 450 at Phil.Liebrecht@gsfc.nasa.gov; (301) 286-5220.

AOS	Advanced Orbiting Systems
AT	Acceptance Test
C&DH	Command and Data Handler
CCSDS	Consultative Committee for Space Data Systems
DAS	Demand Access Service
DFRC	Dryden Flight Research Center
EC	European Commission
ESA	European Space Agency
ESRIN	European Space Research Institute
GN	Ground Network
GPS	Global Positioning System
GSFC	Goddard Space Flight Center
KaDS	Ka-Band Data Services
KaTP	Ka-Band Transition Product
NENS	Near Earth Network Services
ORR	Operation Readiness Review
RF	Radio Frequency
RFP	Request for Proposal
SN	Space Network
SRD	System Requirements Document
STARS	Space-based Telemetry and Range Safety
SWSI	SN Web Services Interface
TC	Telecommand
TDRSS	Tracking and Data Relay Satellite System
TM	Telemetry
TRR	Test Readiness Review
TWG	Technology Working Group

CCSDS Documentation Notes:

- TM Synchronization and Channel Coding, CCSDS 131.0-B-1.
- TM Space Data Link Protocol, CCSDS 132.0-B-1. Space Packet Protocol, CCSDS 133.0-B-1.
- Encapsulation Service, CCSDS 133.1-B-1.
- Proximity-1 Space Link Protocol, CCSDS 211.0-B-1.
- TC Synchronization and Channel Coding, CCSDS 231.0-B-1.
- TC Space Data Link Protocol, CCSDS 232.0-B-1.
- Communications Operation Procedure-1, CCSDS 232.1-B-1.
- Orbit Data Messages, CCSDS 502.0-B-1.
- AOS Space Data Link Protocol, CCSDS 732.0-B-1.
- Space Link Extension--Return Virtual Channel Frames Service Specification, CCSDS 911.2-B-1.
- Space Link Extension--Forward Space Packet Service Specification, CCSDS 912.3-B-1.

Sounding Rocket Launch Sites

PF Poker Flat Research Range
WPS Wallops Island, Virginia

KaDS Documentation Notes

- System Requirements Document
- SN Ka-band customer flight system concept document
- Ground Architecture Document
- Ka-band IP study white paper

Booz | Allen | Hamilton
Updated July 11, 2003